Phil Hayward

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Professional Summary

Experienced full-stack software engineer with 25+ years building secure, high-integrity applications across C#, .NET, C++17, and Python. Proven ability to deliver end-to-end solutions—from low-level network diagnostics and real-time CCTV systems to cloud-native SaaS platforms and clinically validated simulation tools for global pharma. Hands-on experience managing Azure VMs, Docker containers, and Linux infrastructure. Strong focus on observability, reliability, and maintainable code. Collaborative, pragmatic, and committed to delivering working software that solves real business problems.

Technical Skills

Languages & Frameworks:	C#, C++17, Python 3.9+, JavaScript/TypeScript, React, Blazor, WPF, ASP.NET Core
Backend & Data:	.NET 9/Core, Entity Framework, REST/gRPC, SQL Server, PostgreSQL, Azure SQL, Power Query
Infrastructure & DevOps:	Linux (Ubuntu/Debian), Docker, Azure (Linux VMs, App Services), AWS, Git, Jira, CI/CD
Networking & Diagnostics:	IP networking, Wireshark, TCP/IP analysis, MPEG-2 streaming
Security & Compliance:	Zero Trust, RBAC, TLS hardening, GDPR-compliant data handling
Practices:	TDD (xUnit), Microservices, MVC/MVVM, Scrum (remote teams), Observability Design

Professional Experience

Full-Stack Developer
Brand & Deliver – Sheffield (Hybrid)
Dec 2024 – Present

- Built .NET 9 backend services and React/Blazor frontends hosted on Azure Linux VMs, using Docker
- Designed and implemented an observability layer that aggregates system-wide telemetry from Azure Application Insights, transforming raw events into semantic operational insights
- Developed Python/C# ETL pipelines to automate ingestion of supplier product data
- Implemented test-driven development (TDD) with xUnit across the team to improve code reliability

Lead Software Engineer
Lockwood Publishing – Nottingham (Remote)
Nov 2021 – Oct 2024

- Led 4-person cross-disciplinary team to implement GDPR compliance across platform and analytics systems
- Supervised one junior developer, providing mentorship and technical guidance
- Hardened AWS infrastructure by deprecating weak ciphers, enforcing modern TLS, and adding client behaviour validation using k-means clustering of telemetry data
- Built Unity-based test automation framework and internal UI tools to support QA and analytics teams
- Enabled data reporting via Snowflake and Excel Power Query, ensuring all user data handling met GDPR requirements
- Worked asynchronously with global colleagues using Git, Jira, and written documentation—demonstrating strong remote collaboration skills

Senior Software Engineer
Certara (Simcyp) – Sheffield
Nov 2008 – Nov 2021

- Built and managed a 5-person QA test team, establishing testing processes and quality standards
- Led cross-functional projects including multi-partner data anonymisation initiatives
- Developed C# WPF frontends and high-performance C++17 simulation engines for the SimCYP platform—used by virtually all top-20 pharma companies to model drug behaviour in virtual populations
- Designed and implemented anonymised data system for the EU IMI OrBiTo project (13 pharma partners), enabling secure sharing of biopharmaceutics data through dynamic blinding and API attribute masking (published in Comput Methods Programs Biomed, PMID: 28254086)
- Built automated comparison system to statistically validate simulation outputs against known baselines—helping scientists identify anomalies and improve model accuracy
- Delivered technical training to global scientific users

Senior Software Engineer (Security & Surveillance)
Synectics Systems / CoVi Technologies
2001 – 2008

- Developed real-time C++ video surveillance systems for large-scale deployments, including London's Ring of Steel and Manchester City Centre (500+ cameras)

Publication

Hayward P, et al. "Biopharmaceutics data management system for anonymised data sharing and curation: First application with OrBiTo IMI project." *Comput Methods Programs Biomed.* 2017;140:1–10. PMID: 28254086

Education

BSc (Hons) Software Engineering (2:1)
Sheffield Hallam University | 1996

Continuous Learning & Certifications

• Professional Scrum Master I (in progress)

• PRINCE2 Certified

• AWS Developer (Building, Deploying, Optimizing - 2019-2020)

• Kubernetes & GitOps (self-study)

• Linux System Administration (self-study)